

*Eight cases of Thyroid Cysts and Adenomata, treated by enucleation. By CHARTERS J. SYMONDS. Read December 13, 1889.*

THE following cases are offered as a contribution to the surgery of the thyroid gland. They are given in chronological order, to indicate the improvement in the method of operation.

CASE 1. *Adenoma of thyroid: extirpation of entire gland.*—Thomas B., æt. 29, was admitted into Guy's Hospital May 17, 1883. Just before Christmas, 1882, he noticed a pain in his neck, which increased on swallowing; in February, 1883, a lump was noticed above the sternum, and in March he was obliged to give up work on account of the inconvenience on stooping. He was admitted under Dr. Mahomed into Philip Ward with dysphagia, and a tumour above and behind the sternum. It varied in size, but was no smaller when discharged on April 21.

When admitted under Mr. Symonds there was a firm tumour in the median line reaching two inches above the sternum, the lower end lying beneath the bone. It extended a little to the left side under the sterno-mastoid. He complained of pain during swallowing, when the tumour moved up and down with the thyroid. It was rounded, elastic, apparently solid. When working, the tumour compressed the trachea and produced dyspnœa.

May 29.—A median incision was made from the centre of the thyroid cartilage to the sternum, the tumour quickly exposed and brought forward with the thyroid lobes; it was attached to the isthmus. After ligaturing several small vessels the tumour was detached from the lobes. A wide irregular bleeding surface was left, and as this seemed part of the tumour the entire gland was removed. Commencing on the right side the lower border was raised, and the inferior thyroid arteries and veins ligatured, the former with silk, the latter with gut; then the superior was ligatured and divided. Next the isthmus was dissected off the trachea, the left lobe attacked in the same way, and the whole removed. Very little blood was lost, neither the carotid sheath nor the laryngeal

nerves being seen. The operation lasted two hours. The spray was used. Two drainage-tubes were inserted, one on each side. No dyspnœa occurred. Seven hours later the breath was noticed to be a little foul.

May 30.—Pulse 92, temp. 100°, evening temp. 98·6°. Voice natural. Dressed at 2 P.M.; both tubes removed and returned, not syringed.

May 31st.—Dressed; one tube removed and replaced; breath still foul. He has expectorated a good deal of mucopurulent material without odour. Nine hours later (fifty-three hours from operation) fœtor had disappeared from breath and expectoration almost ceased. He had very little pain on swallowing.

June 4.—Tubes shortened, sutures removed. Could swallow solids.

June 6.—Tubes again shortened.

June 14.—Both tubes removed and the man got up.

June 28.—The small sinus that had existed in the drainage-tube site was now completely healed. The voice has decidedly improved, being very much clearer and more distinct.

Pulse and temperature were normal throughout.

His was the first case upon which I had operated, and was undertaken before the cachexia following complete extirpation was well known. When the tumour was removed the ragged surface left seemed likely to bleed, and therefore the whole gland was removed. The isthmus was large, and the tumour, which was quite solid, had grown from the angle between it and the left lobe. It was a matter of great regret to me afterwards that the gland was removed. It was quite an unnecessary procedure.

All attempts to trace the patient up to date have failed.

CASE 2. *Adenoma of the right lobe of the thyroid (causing complete dysphagia): extirpation of the lobe with the tumour: recurrent dysphagia.*—Mary Ann R., æt. 54, admitted into Guy's Hospital June 19, 1883. She came as an out-patient on June 17 complaining of dysphagia; she was to be admitted in three weeks, but the dysphagia increased so rapidly that she had to be taken in on the 19th. She had a rounded tumour in the neck between the right sterno-mastoid and trachea. It moved with the trachea, measured  $2\frac{1}{4}$  inches vertically and 3 inches horizontally. The anterior and lower limits were well defined, the outward limit was obscure. A heaving but no expansile pulsation existed. It extended from

a little below the upper margin of the thyroid cartilage nearly to the sternum. No venous congestion, pupils normal, no dyspnœa, voice weak. The larynx slightly pressed to the left. The tumour was first noticed two years ago, has gradually increased. Dysphagia for twelve months, no solid food for two weeks.

June 19.—She had to be fed by a rubber stomach-tube, and enemata were ordered.

June 27.—An incision 3 inches long was made over the tumour to the right of the middle line, the muscles separated, and the tumour exposed. The isthmus was divided between two silk ligatures to give room; that on the right side slipped off, the other was cut short and left. Numerous vessels were tied, and when the lower end was freed the lobe and tumour bulged forwards, appearing three times as large as anticipated. The original incision had to be enlarged in both directions; considerable hæmorrhage took place, and many vessels were tied. The isthmus was  $\frac{7}{8}$  of an inch wide. At the lower part of the wound the pleura was seen, and the carotid artery; a large drainage-tube was put in. The operation occupied two hours. Spray was used. The temperature of the theatre was about 86°. Four hours later a little bleeding took place, and a vessel in the right edge of the wound was tied. The head was placed between sand-bags.

June 28.—Dressed to-day, skin united, no swelling.

The tumour on dissection was found to be encapsuled, and was easily turned out from the lobe of the gland. It was placed at the back, but might have been removed by cutting down to the surface and then dissecting off the lobes. In all subsequent cases this knowledge of the anatomy was used, and no bleeding has been encountered. In structure it showed the usual spaces lined by cubical cells, and filled with mucoid material.

June 30.—Dressed, no suppuration, tube replaced by a smaller one. The temperature has been up at night to 101° since the operation. No cause found except sickness and the high temperature of the atmosphere (80° in shade, with thunderstorms).

July 9.—Tube removed.

July 23.—Her voice is weaker since the operation, and the right cord moves very feebly.

August 8.—Discharged, wound healed, swallowing well all kinds of food.

December 13.—She returned with difficulty of swallowing and a swelling beneath the cicatrix; the right vocal cord was motionless.

December 14.—Swelling opened, a little pus was found, and the silk ligature with loop entire, which had tied the isthmus, was found loose near the carotid. One other small ligature was found.

December 28.—Discharged, much relieved.

September 14, 1884.—She was readmitted with dysphagia and much reduced in health, and suffering with general pains in her joints and limbs. Admitted with a view of separating the œsophagus from the cicatrix.

September 19.—By a vertical incision the œsophagus was exposed in the old cicatrix, a bougie was passed into the œsophagus as a guide, and  $1\frac{1}{2}$  inches of its length on the right side was separated from the surrounding structures. No old ligature was found, no bleeding took place, wound dressed with carbolic gauze.

September 29.—She was discharged able to swallow quite well, with the wound quite healed.

This patient continued to attend from time to time till the middle of 1888, five years after the operation. The dysphagia remained, but always improved or disappeared when she was well fed and rested. The vocal cord never recovered its movement, but she had a good voice, and could cough three times in succession. There seemed no doubt that the nerve was injured during the operation. It was not seen, nor was there any difficulty in raising up the tumour. Prior to the operation the voice was weak. Complete recovery of deglutition followed the removal of the growth, and lasted for some time, showing that the dysphagia was due to pressure; but that which subsequently returned is not so easily explained. At first I thought it due to the cicatrix which must have been attached to trachea and œsophagus, causing traction. On this view the gullet was exposed and freed, with temporary relief.

The improvement that followed good living and rest pointed to a neurotic origin.

CASE 3. *Adeno-cystoma of thyroid: extirpation.*—G. S., æt. 30, a chemist and analyst, was brought to me for a rounded swelling on the left side of the median line beneath the sterno-mastoid. It moved with the trachea and presented all the characters of a thyroid cyst. The finger could just be



inserted between its lower border and the sternum when the larynx rose in deglutition, but usually it lay partly beneath the bone. It compressed the trachea and gave much inconvenience. For some time he was treated by iodides without relief, and he then requested that it might be removed. Altogether it had existed nearly a year.

August 29, 1886.—A median incision readily exposed the cyst, the capsule was followed, and the tumour turned out with great rapidity and ease. Three of the small vessels were tied, a drainage-tube inserted, and the wound closed with silk. The isthmus was large but healthy. The tumour was connected with the lower and inner face of the left lobe. It measured two inches by an inch and a half, had a firm fibrous capsule with septa dividing it into loculi. In the wall and septa was some calcareous material. Most of the spaces were filled with mucous fluid containing cholesterin. In others there was the soft gelatinous material seen in the other species of adenoma. Microscopically there were the usual acini, lined by epithelium of a short columnar form.

The wound was dressed on the first day because, as usually happens, some blood had run beyond the dressings.

On the third day the tube was removed and all the sutures, primary union having occurred. He swallowed freely and had no pain.

On September 6, eight days from the operation, he was discharged quite well. This patient was seen in March, 1889, when he was well.

CASE 4. *Thyroid adenoma: extirpation.*—Janet C., æt. 27, admitted December 31, 1886. Five years ago a friend whom she had not seen for some time noticed the enlargement of the neck, which has gradually increased since. She is fair and thin. In the right lobe is a rounded moveable tumour. With the head at rest it crosses the trachea to the left side, reaches as low as the sternum and as high as the lower border of thyroid cartilage. When the sterno-mastoid is in action the tumour recedes and the front of the trachea is exposed. When the parts are relaxed the finger can be placed between the tumour and the sternum. The left lobe and isthmus are normal. The right eye looks smaller and sunken. The palpebral aperture is smaller, and the pupil is contracted, being one third smaller than the left. She complains that this eye is tired, especially at night, and it looks heavy and half closed. The voice is natural. Both cheeks flush. No

difference in the sense of smell. In accommodation there appears to be more contraction of the left pupil than of the right. The pupil contracts further to light, but does not dilate in shade. These symptoms show pressure on sympathetic. She complained of the aching of the eye and of difficulty in breathing at times, and was anxious to have the mass removed.

January 4, 1887.—Under full antiseptic precautions a median incision was made, the capsule reached, and the tumour quickly enucleated. A few small vessels required ligature. The gland was not interfered with. A drainage-tube was passed into the wound and silk sutures employed. The tumour was oval, soft and very elastic, so that most thought it fluid when removed. On making a section it proved to be a solid, pale, semi-gelatinous tumour, in which, however, the glandular structure could be discovered. It was the size of a small hen's egg.

January 5.—Tube shortened.

January 7.—Second dressing, suture and tube removed.

January 10.—Third dressing, boracic lint substituted.

January 11.—Up for half an hour. A granulating surface where the tube entered alone remained.

January 20.—Pupil remains the same; it contracts to light, but dilates less than the left in shade.

January 21.—Discharged.

February 25, 1889.—Came up feeling unwell. Right pupil is larger than it used to be, and the eye less heavy. No return of the growth. Her symptoms connected with depression of health only.

The sympathetic nerve phenomena in this case were very marked, the condition of the pupil and palpebral aperture being exactly similar to that seen in cases of ruptured brachial plexus. The tumour was not deeply situated, was easily removed, and the rest of the lobe appeared healthy, and after five years there is no recurrence. It appears, therefore, a little difficult to explain the implication of the nerve. May it be due to some other cause, as the ocular appearances persist?

N.B.—This patient, exhibiting still the above sympathetic nerve phenomena but otherwise in good health, was shown when the paper was read.

CASE 5. *Adeno-cystoma of thyroid: extirpation with the left lobe of the gland.*—Mary L., æt. 23, admitted to Guy's Hospital May, 1887, with a localised growth in the thyroid.

The tumour is irregular in shape, reaches from the top of the thyroid cartilage to the sternum, behind to the posterior border of the sterno-mastoid, in front to the middle line. A separate lobule occupies the middle line, and is connected with the greater tumour. The isthmus apparently can be felt above and to the right of the small tumour. Right side feels normal when lying down; when up looks full.

Her eyes, she is told, are more prominent than they used to be. Four months ago she was told this, while the swelling has existed in the neck four years. No other member of the family affected. The pupils are the same in size and reaction, no one-sided pain; no aching in the eyes. At night she feels a choking sensation, but no cough or pain in chest. The tumour has increased rapidly during the last three months, and she has got thin.

June 7.—Operation at 9 a.m. The thyroid had diminished a good deal since she had been resting. A median incision was made from the hyoid bone to the sternum. Numerous large veins were exposed, and one or two wounded. After drawing aside the sterno-hyoid on right side, which was thin, that on the left side was also reflected. Then the deep fascia was divided, and the small central tumour exposed. It was bluish and apparently cystic. Above and internal to this the isthmus was exposed, and running off to the left and upward a large mass of thyroid which concealed the trachea; this also apparently concealed the greater part of the tumour. Having decided to extirpate the left lobe, I proceeded to isolate the isthmus in order to command the trachea as soon as possible. A double silk ligature was carried round and the isthmus divided; it proved to be smaller than expected. The tumour was then, with the lobe, dissected off the trachea and all vessels closed. Then the lower part of the tumour was exposed, and by careful dissection raised forward without any trouble or hæmorrhage. When the upper extremity was reached the inferior thyroid vessels were tied, and it now turned out that the thyroid lobe lay in front of the tumour and on its median side. The whole mass was now separated, and consisted of a lobulated tumour and the left lobe of the thyroid.

The inferior thyroid was not seen. Besides the superior thyroid vessels only three other small ones required ligature. These were all secured with catgut. The numerous veins that bled in the earlier part of the operation were closed by the pressure of forceps. The recurrent laryngeal nerve was not



seen. After the removal a deep cavity was left, the lower part of the floor of which projected during expiration. Several silk sutures closed the wound, into which a large drainage-tube was inserted. The spray was used throughout, together with other antiseptic precautions.

The whole operation lasted about forty-five minutes. There was no laryngeal spasm at all, and very little blood was lost, though much more than in the other cases, on account of the lobe being excised. Three fine gut ligatures and the silk one on the isthmus were all that were necessary.

The wound was dressed about four times, the pulse and temperature remained normal, and she was discharged well on June 23.

By the eighth day the wound was reduced to a small superficial granulating surface. The drainage-tube was removed in this case early, I think within forty-eight hours.

The tumour measured  $3 \times 2 \times 1\frac{1}{2}$  inches; it was composed of a number of small cysts, separated by fibrous septa surrounded by a definite capsule, and contained the usual gelatinous material. There was some solid material also. The lobe was quite healthy, and was easily dissected off from the growth.

*CASE 6. Thyroid cyst behind right lobe: extirpation: primary union.*—Mrs. M., æt. 24, was sent to me by Dr. Steele-Perkins, of Streatham. She had a thyroid cyst on the right side, of three years' growth. It was freely moveable, and gave no inconvenience except from its size, which was about as large as a small orange. It appeared to be beneath the right lobe, for an edge somewhat lobulated could be felt covering the upper part of the tumour, while below this it was smooth. The former experience of these tumours left it doubtful whether it was a pure cyst or an adeno-cystoma. The patient being anxious for its removal I decided to extirpate.

On May 31, 1888, assisted by Dr. Steele-Perkins and my dresser, Mr. Judon, Mr. Roper giving chloroform, a median incision was made and the right lobe exposed, behind which was situated the tumour. Just below the lobe a part of the cyst was exposed. The lower end of the lobe was raised off the cyst without any bleeding. Then the cyst was accidentally punctured, a circumstance which I thought would delay its removal, but on the contrary it much facilitated the measure, for the edge could be drawn forward and the gland dissected off with a blunt dissector. When removed the pre-vertebral muscle with the œsophagus were exposed. The lobe was not



interfered with. No vessel at all was ligatured. The cyst showed the usual gelatinous glandular material in the wall, and the usual fluid. A smaller opening than usual sufficed owing to the cyst being opened. The cyst was about two inches in diameter. The wound was filled with sublimate solution (1 in 1000), throughout the operation the spray not being used. Fine silk sutures, one drainage-tube, iodoform, and gauze. On the second day dressed, and tube removed on the third day. Primary union took place, there was no elevation of pulse or temperature, and by the end of a week she was up and about.

The accidental puncture of this cyst led me to decide in future cases to deal with them as with ovarian cysts—that is, to make a small cutaneous incision, to expose thoroughly and open the cyst, and then to pull it forward, pushing off the gland with the handle of a scalpel or a blunt dissector.

CASE 7. *Small right thyroid cyst: extirpation.*—Mrs. U., æt. 25, admitted into Martha Ward, November 24, 1888. Married, has two children, youngest one year nine months. After the birth of the last she observed the swelling. She complains of a small lump in the right side of her neck, situated on the upper part of the right lobe of the thyroid, just between it and the isthmus. This is rounded, tense, and elastic, and just below can be felt an irregular mass, which appears to be the lobe flattened out. She states that this interferes with breathing at times, and gives her a good deal of distress, and asks that it be removed. There was no sympathetic nerve disturbance.

November 28.—A small vertical median incision was made, the muscles separated, and the cyst at once exposed. It was taken up by forceps and shelled out by a director from the gland which surrounded it below and from the fascia above. It was opened in the process; only one small vessel in the thyroid required ligature. The cyst was one inch in diameter, the wall contained a few masses of glandular tissue, similar to that usually found in such specimens.

The wound was dressed once on the second day. On the fourth the sutures were removed, and by the end of the week she had left the hospital. She presented herself a couple of weeks later, very much improved in health, having gained flesh and lost the haggard look she presented before the operation. A good deal of her distress was nervous.

CASE 8. *Adeno-cystoma of thyroid* (reported by Mr. N.

Irestone).—Keziah W., æt. 41, admitted to Guy's, September 30, 1889. Married and has three children. She has lived in India. Nine years ago the present swelling began; the growth has been very slow until the last three months, when it has increased rapidly. There was a large growth occupying the left side and middle line. It reached from the upper border of the thyroid cartilage to the sternum and over to the right sterno-mastoid muscle. The larynx was pushed nearly an inch out of the median line. The tumour was elastic, moved readily, and appeared to be connected with the left lobe where it joins the isthmus.

October 1, 1889.—A median incision an inch and a half long was carried through between the muscles, and the cyst exposed without any bleeding. After sufficient of the wall was brought into view the cyst was opened and a good deal of fluid evacuated. The margins were seized with forceps and the cyst drawn forwards. On inserting the finger a good deal of solid growth was found. The thyroid was dissected off with the finger and a raspator, while the cyst was drawn forwards. No difficulty was experienced in removing the cyst through an opening much shorter than the length of the cyst. One small vessel was tied as the tissue peeled off. The wound was constantly filled with sublimate solution, the spray was not used. Iodoform was freely dusted, and a drainage-tube inserted, the wound closed with silk. The tube was removed at the first dressing on the second day. The sutures were removed at the second dressing on the seventh day. On the ninth day she got up, and went out on October 12, the eleventh day. She was a feeble cachectic-looking woman, and required greater care than usual. It was feared that a small external opening with a wide and large and deep cavity might occasion difficulty in securing a bleeding vessel. It was found, however, that the wall of the cavity was so elastic and loose that it could easily be brought up to the surface and examined in every part. The method, therefore, of operating through a small incision proved quite successful. The wall of the cyst had attached to it a greater amount of solid adenomatous growth than usual; the mass weighed nearly three ounces. In structure this was the same as in the other specimens.

*Remarks.*—Of the eight cases, six were in women and two in men. Six of the patients were thirty or under, while one was fifty-four. Several methods have been adopted in the treatment of cysts of the thyroid gland. Of the two leading

plans, one is that of injecting perchloride of iron and setting up suppuration, and maintaining drainage. This is known as Mackenzie's, upon which a recent communication has been published by Mr. Hovell. This plan takes, as a rule, many weeks, and is often attended with severe hectic fever. Its chief merit lies in the small size of the resulting scar. When, however, these tumours are examined, and the adenomatous growth is found in them (or calcareous plates), one sees a reason why injection has only a limited application, while for the solid forms it is of course useless. Leaving this plan then to stand upon its own merits, I myself prefer one that leads to a rapid recovery in a few days.

Mayo Robson, and others before and after him, have advocated laying open the cyst and stitching it to the skin. This is also a prolonged method, leaves as large a wound, and has no advantages over extirpation, when it can be shown that the latter method can be performed without hæmorrhage. These eight cases were all treated by extirpation. In two the lobe in which the tumour grew was removed, in one the entire gland, while in the remainder the new growth was alone extirpated. At the time of the first operation I knew little as to the safety of these operations, or of the consequence attending complete removal of the gland. But this case taught me in future to be content with one lobe at most. In the second the lobe was removed, the other side being healthy. The isthmus was tied with a silk ligature, and here also the incision was made *over* the tumour to the right of the middle line. Now here three suggestions for improvement arose. In the first place the lateral incision gives far less space than the median, unless, like Hahn, we are prepared to cut through the skin in various directions. In all subsequent cases the median incision was used. The lobe and the tumour can always be brought under the incision when the deep fascia is divided and the muscles separated. The next point and the most important of all was this, that after the removal the tumour proved to be completely encapsuled, and might have been turned out with the greatest ease from the back of the lobe. This observation directed future operations, for in all except one the lobe was dissected off. The third lesson learnt from this case was the method of dealing with the isthmus. The ligature subsequently came away, and though this may have been due to imperfect preparation, others of similar size not having given trouble, it suggested some other method of securing the isthmus. Consequently in a case of enormous goitre, to be



subsequently recorded, I scraped through the isthmus with a blunt dissector, following the sulci between the various lobules. In this way the tissue to be secured amounted to a small fibrous band containing the vessels and requiring only a fine ligature. There are no large veins in this part of the gland, and if the lobules be first freely exposed little hæmorrhage will result.

The experience gained was applied in four other cases, and with the result that no bleeding occurred of any moment. In one case not a single vessel was secured, in the others only two or three small ones.

In the remaining case the lobe was removed because it appeared that the cyst was intimately incorporated with it. This was an error, and due to the fact that the cyst was behind the lobe, and therefore the capsule could not easily be reached. On dissecting this specimen it appeared that if the gland had been raised off the cyst, the latter could easily have been enucleated. Prepared for a similar arrangement, and how to deal with it, a case soon came under treatment giving the opportunity (Case 6). On exposing the swelling the edge of the lobe was seen, and below this the lower rounded limit of the cyst. The capsule was exposed, and once its level was reached, the dissection was carried out by a raspator, and the cyst peeled out without any hæmorrhage whatever. In this operation a very important suggestion arose. While isolating the cyst it was opened, and it collapsed. This I looked upon as unfortunate, and as likely to render removal difficult. It proved otherwise; for by securing the margins of the cyst it was easily removed by dissecting back the thyroid. I determined in a future case of moderate dimensions to make a small cutaneous incision, expose the wall of the cyst over a space large enough to seize with forceps, open it, secure the sides, and peel out as one does in ovariectomy. This plan was successfully carried out in the next case, and in the last case an adeno-cystoma measuring three inches by two was removed through an incision one and a half inches long. After removal the wall of the large cavity could be brought easily up to the surface and examined for bleeding points. The facility with which this could be done appeared to dispose of the only danger incident to the method, viz. inability to secure a bleeding point deep in the cavity.

It may be well to summarise the plan which seems to me the best. For deep-seated growths make a median incision one and a half to two inches long, having its centre opposite or

over the centre of the tumour. When the deep fascia is divided, and the muscles separated, the tumour and lobe can at once be brought to the median line. Search next for the capsule. In most cases it will be seen at once, but in a few the edge of the gland may have to be raised first. It is most essential to be sure that the smooth white covering is exposed; for if not, and the dissection be carried outside it, troublesome hæmorrhage is sure to follow—in fact, the entire success turns upon this point. If the tumour be solid it must be dissected out by a blunt dissector, while the margins of the gland are held aside by forceps. A cyst can be extirpated in the same way, but I have found it much easier to evacuate the cyst at once, protecting the parts with sponges, and then to peel it out. There is never any pedicle in these cases, and therefore no big vessel to tie as the tumour comes out. Hæmorrhage need not be feared, and even if it did occur, the wound can then be enlarged. For a cyst I suggest this plan as leaving less scar and facilitating the operation; a cyst two inches across may thus be removed without any bleeding. We may compare these tumours to mammary adenoma in the ease with which they can be removed. They give rise to less bleeding, because we can reach the growth without cutting through glandular tissue. They are overgrowths of certain parts of the thyroid; some are solid, some cystic, others a mixture of these two. They are encapsuled, and turn out with margins.

Professor Hahn, of Berlin, whom I saw remove a simple cyst in January last, employed the lateral incision, enlarging it by several other incisions in various directions. He used many silk ligatures to tie the surrounding tissues, and finally stuffed the wounds. The method here employed is superior, in that there is less scar, less hæmorrhage, and primary union. It is unnecessary to say more than that strict care was taken to have everything aseptic. I myself attach the greatest importance to the use of towels wrung out of lotion fastened round the operation site, to the arms being bare, to the use of an apron or towel pinned over the waistcoat, both by surgeon and assistants.

In most of the cases the spray was used; in three, sublimate only. The situation is a good one for the use of solutions, as the wound can be kept filled. The after treatment consists in the removal of the drainage-tube on the second day, and in most of the cases this was the only elaborate dressing, simple boracic ointment being substituted.

*Structure.*—All the cysts contained the usual dark fluid, and

in every one there was more or less of solid material, looking red and gelatinous. This on microscopic examination showed acini lined with cubical or columnar epithelium. The solid forms have the same structure. Hence the correspondence with the adenomata of the breast is still closer, for in both we have solid tumours and cysts with varying amounts of adenomatous growths.

In the cases here recorded one tumour only existed in each case, but there seems no reason whatever why two or more should not be enucleated at the same operation, it being always ascertained that the rest of the gland is healthy.

As to diagnosis between cystic and solid, it seems in small growths at least impossible to decide without aspiration. I prefer to operate at once without previous exploration, and puncture the tumour when freely exposed. A perusal of the cases will show that in all but one the symptoms demanded relief. Removal is unnecessary where symptoms are absent, unless the patient requests it.

In conclusion I would like to add that in this communication my only object has been to relate my own experience up to the present time, in the hope that it may prove useful to others, and not to attempt to formulate a method which in some cases may be unsuitable. For instance, it may occasionally be necessary to increase the incision by an oblique extension upward where the tumour is solid, but a previous evacuation in cysts will, I think, render this unnecessary.

*Note.*—Some of the cases have been mentioned in a paper published in the *Guy's Hospital Reports* by Mr. Pennell, viz. Nos. 1, 2, 3, 4, and 5.



1	Thomas B.	29	Adenoma placed partly behind sternum; 6 months' history	Removal of tumour and whole thyroid, May 29th, 1883	Spray; tubes wholly removed 16th day; all healed 30th day	Primary union except track of tube.
2	Mary Ann R.	54	Adenoma behind right lobe; complete dysphagia; 24 by 3 inches; 2 years' history; 1 year dysphagia	Tumour and right lobe removed June 27th, 1883	Spray; isthmus tied with silk; smaller tube inserted on 3rd day and removed on 12th day; sinus closed 26th day	Primary union except tube track; dysphagia completely relieved, but recurred later; right vocal cord paralysed; œsophagus subsequently dissected, free from the scar.
3	George S.	30	Adeno-cystoma in lower part of left lobe compressing trachea; 1 year's symptoms	Tumour removed August 29th, 1886; three small vessels tied; measured 2 by 1½ inches	Spray; tube and sutures removed on 3rd day	Primary union; discharged on 8th day.
4	Janet C.	27	Adenoma in right lobe; 5 years; ocular sympathetic paralysis; dyspnoea at times	Removed January 4th, 1887; easily shelled out; two or three small vessels tied	Spray; at second dressing, on 3rd day, tube and sutures removed; up on 7th day	Primary union; discharged on 17th day; ocular symptoms improved, but persist December, 1889.
5	Mary L.	23	Multilocular cystoma in the back of left lobe, and concealed by it; tumour 3 by 2 inches	Tumour and lobe removed June 7th, 1887; venous bleeding; three gut ligatures used, and a silk to isthmus	Spray; tube removed on 2nd day	Primary union; discharged 16th day.
6	Mrs. U.	24	Cystoma 3 years' growth; size small orange; in back of left lobe	Removed May 31st, 1888; lobe raised up; no vessels ligatured	Sublimate solution only used; tube removed 3rd day	Primary union; up at end of a week.
7	Mary U.	25	Cystoma of right lobe; 18 months; some dyspnoea; cyst 1 inch in diameter	Removed November 28th, 1888; one small vessel ligatured	Sublimate only; tube removed 2nd day; sutures on 4th	Primary union; discharged at end of week.
8	Keziah W.	41	Adeno-cystoma 9 years; dyspnoea of late; reached from top of larynx to sternum; larynx displaced	Removed October 1st, 1889; one small vessel tied	Sublimate only; tube removed 2nd day; sutures 7th	Primary union; discharged on 11th day.

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